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Management of Chronic Nonspecific Low Back Pain in Primary Care: A Descriptive Study

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Study Design. A retrospective, descriptive study.

Objectives. To describe the diagnostic and therapeutic procedures for patients with chronic low back pain in primary care.

Summary of Background Data. Most previous studies have described the management of acute low back pain, but little is known about the management of chronic low back pain in primary care.

Methods. Twenty-six general practitioners involved in the Registration Network of Family Practices of the University of Limburg in The Netherlands participated in this study. All patients and general practitioners were asked to complete a retrospective questionnaire, and there was a 12-month follow-up.

Results. The total study population consisted of 524 patients with chronic low back pain. Twenty-three percent of the patients had had radiographs taken during the previous 12 months, and 5% had been examined by other imaging techniques. Twenty-nine percent of the study population had not received any therapy at all, 46% had received medication, mostly (36%) nonsteroidal anti-inflammatory drugs (NSAIDs), and for 18% (bed)-rest had been advised. Thirty-six percent of the study population had been referred to a physiotherapist.

Conclusions. The therapeutic management of chronic low back pain seems to lack consistency. Clinical guidelines are needed to improve the management of chronic low back pain in primary care. [Key words: chronic low back pain, diagnosis, management, primary care, therapy] **Spine 1997;22:76–82**

Low back pain (LBP) is a major health problem among populations in Western industrialized countries and a major cause of medical expenses, absenteeism, and disability. The total direct medical costs of back pain in the Netherlands in 1991 were estimated at U.S. $368 million, and the total indirect costs amounted to U.S. $4.6 billion.[30] The lifetime prevalence of LBP is typically reported to be more than 70%, the 1-year prevalence is reported to be between 15% and 45%, and the 1-year incidence about 5%.[1,11] Though LBP is often a benign and self-limiting disease with recovery rates of 90% within 6 weeks, chronic LBP and recurrences are very frequent. About 1% to 7% of the incident cases of LBP will persist after 3 months and usually are labeled as chronic.[1] These patients with chronic LBP account for 75% to 85% of the total worker absenteeism and compensatory costs of LBP.[10,28]

In a population study in the Netherlands, about 51% of men and 58% of women reported ever having had LBP; 20% of these men (10% of the total male population) and 32% of these women (18% of the total female population) had consulted their general practitioner (GP) because of LBP.[31] The total number of patients visiting a GP because of back pain has been estimated at more than 70 per 1000 registered patients per year.[20] The incidence and prevalence of LBP in general practice in the Netherlands are reported to be 30 and 35 episodes per 1000 registered patients per year, respectively. The 1-year incidence and prevalence of LBP with radiation symptoms are six and nine episodes per 1000 registered patients, respectively.[16]

Although LBP is one of the most frequent reasons for consulting a GP in the Netherlands and the second leading symptomatic reason for consulting physicians in the United States, little is known about the diagnostic and therapeutic strategies chosen in primary care, especially in the more chronic cases.[7,16] A recent study of the use of medical services for acute LBP reported overuse and underuse of diagnostic and therapeutic interventions.[27] In a national survey in the United States, a random sample of physicians from eight specialties were asked about the diagnostic tests and the therapeutic interventions they believed to be effective and about the tests and treatments they would request for hypothetical patients with acute LBP, acute sciatica, and chronic LBP.[4,5] Little consensus was found among the physicians, and the reported use of diagnostic tests and therapeutic interventions for LBP did not correspond with the guidelines suggested by the Quebec Task Force on Spinal Disorders (QTF).[28] Most

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of the diagnostic and therapeutic interventions applied to patients with LBP lack scientific evidence regarding their effectiveness.[4,5,28] This has resulted in widespread recommendations favoring a conservative approach to the management of LBP.[10,21,28] Several studies already have investigated the management of acute LBP in general practice and have reported on the resulting use of and impact on medical services.[2,23,29] The aim of this study was to describe the diagnostic and therapeutic procedures used for patients with chronic LBP.

■ Methods

Registration Network of Family Practices. The GPs who participated in this study were recruited from the Registration Network of Family Practices of the University of Limburg in the Netherlands.[18] The Registration Network has been established primarily as a sampling frame for researchers, the main goal being to establish an anonymous computerized database containing various patient characteristics and all relevant health problems. A health problem is defined as "anything that has required, does or may require healthcare management and has affected or could significantly affect a person's physical or emotional well-being." Health problems are recorded only by the GPs if they are permanent (no recovery expected), chronic (duration longer than 6 months) or recurrent (more than three recurrences within 6 months). All health problems are coded according to the International Classification of Primary Care (ICPC).[9] All GPs participating in the Registration Network use computerized systems to store and continuously update the medical records of all patients registered with them.

The GPs participating in the present study are not entirely representative of all GPs in the Netherlands. The age, gender, and amount of practical experience of the GPs involved in this study are similar to that of all other Dutch GPs, but more of the GPs in this study work in group practices or health centers, more practices are located in urban districts, a higher percentage of this study's GPs are members of the Dutch College of General Practitioners, and a higher percentage (all) of this study's GPs have computerized medical records. The patient population in this study is very similar to the Dutch general population regarding age, gender, type of health insurance, and level of education. The data on health problems and diagnoses in the computerized medical records of the Registration Network are shown to be reliable.[19]

Measurements and Instruments. All patients and GPs were asked to complete a retrospective questionnaire covering a period of 12 months. The GP is the only type of physician involved in Dutch primary health care and is, therefore, the "gate-keeper" of the medical system. Most people in the Netherlands are registered with a GP, irrespective of whether they have compulsory insurance in a sickness fund or are privately insured. The majority of health problems presented to GPs are managed by the GPs themselves and, in principle, they are responsible for all referrals to paramedical therapists or medical specialists. Therefore, in the Netherlands the GPs are the most important source of information regarding diagnostic modalities, therapeutic interventions, and referrals that take place in primary care.[19] The GP questionnaire contained items about diagnoses and the frequency of diagnostic modalities, therapeutic interventions, and referrals to paramedical therapists or medical specialists during the previous 12 months. Diagnoses were classified into three broad categories: 1) LBP, 2) LBP with radiating symptoms, and 3) other diagnoses. Examples of category 1 were reports of back pain, lumbago, myalgia, chronic/lumbar pain syndrome, and postural dysfunction; examples of category 2 were discopathy, (pseudo)radicular syndrome, radiculopathy, herniated nucleus pulposus, and ischia; and examples of category 3 were arthrosis/arthropathy, spondylexarthrosis, reports of degenerative symptoms, spondylolysis/spondylolisthesis, and sacroiliitis. All data were collected by the GPs from their computerized database, in which all information concerning each patient, *i.e.*, the medical record, is stored. Data on diagnostic and therapeutic modalities and referrals are stored in these medical records in chronologic sequence.

Because repeated referrals may not always be accurately registered by GPs and because patients sometimes visit complementary therapists on their own initiative, the patient questionnaire also contained items about visits to paramedical and complementary therapists (including the number of visits and the number of weeks of treatment) and visits to medical specialists (number of visits) during the previous 12 months.

To obtain information on the patient characteristics and the nature of the symptoms reported, the patient questionnaire contained items about age, gender, insurance, civil status, profession, the number of recurrences, and the severity, localization, and duration of the symptoms reported. Profession was classified into five categories: 1) unskilled laborers; 2) skilled laborers, lower class civil servants, lower class office staff, and lower class healthcare workers; 3) middle class employees, middle class civil servants, and middle class technical personnel; 4) upper class civil servants and academic personnel, and 5) housewives. The present job of the patient was scored, or, in cases of unemployment or retirement, the last job to be held was scored. The severity of the current symptoms was measured on a 10-point ordinal scale, ranging from 1 (no symptoms) to 10 (very severe symptoms). The localization of the symptoms was assessed by multiple choice answers, which contained the following categories: only LBP, LBP/pain in the buttocks, LBP with radiation above the knee, and LBP with radiation below the knee and elsewhere. The first two categories were classified as LBP, and the third and fourth categories were classified as LBP with radiation. The patients also were asked about the duration of the current symptoms, the total number of recurrences, and the total number of weeks/years since their first episode.

Functional status was assessed to evaluate the impact of LBP on the physical functioning of the patients, which also may be regarded as a measure of the severity of the reported pain. Functional status was assessed by means of the Roland Disability Questionnaire (RDQ). The RDQ has been derived from the Sickness Impact Profile and was constructed specifically to measure functional status in LBP patients. The RDQ consists of 24 items concerning the general activities of daily life. Each item marked scores one point, which means that a patient score can range from 0 to 24. High scores on the RDQ indicate a low functional status. The RDQ has been reported to be a reliable, sensitive, and valid instrument for measuring the functional status of patients with LBP.[8,25,26]

The Nottingham Health Profile (NHP) was used to assess the general health perception. The first section of the NHP contains 38 questions reflecting six items: sleep (five questions),

physical mobility (eight questions), energy (three questions), pain (eight questions), emotional reactions (nine questions), and social isolation (five questions). Appropriate weights are given to positive answers in each item according to their severity, resulting in a range from 0 to 100 for any item. Higher scores correspond to a lower health perception. The second section of the NHP comprises seven questions relating to paid employment, jobs around the house, social life, personal relationships, sex life, hobbies and interests, and vacations. This section yields one score by counting the number of positive answers. The original version of the NHP and the Dutch translation have proved to be reliable and valid instruments that can be applied to various groups of people, such as chronically ill or elderly patients.[12,14]

Patient Sample. Patients were included on the basis of the following criteria: 1) LBP (ICPC-code L03), 2) LBP with radiating symptoms (ICPC-code L86), 3) age 20–60 years, and 4) current symptoms for at least 3 months at baseline.[15] Patients were excluded if they had specific LBP caused by infection, metastasis, osteoporosis, rheumatoid arthritis, or fractures. The GPs selected the patients from their computerized databases, using the relevant ICPC-codes (L03 and L86). To guarantee the privacy of the nonresponders, the first questionnaire with a letter of introduction and information was sent to the patients by the GPs as soon as possible after selection. Patients were asked to participate and to return the completed questionnaire to the research institute. Because some patients might have been registered as having permanent, chronic, or recurrent LBP, but had not had a current, active episode for more than 3 months, the authors checked the questionnaires to ensure that the patients met the inclusion criteria.

Statistics. Descriptive statistics were used to present the frequencies of the diagnostic and therapeutic interventions and the referrals. All frequencies are represented by valid percentages, in which missing values were not included. Differences in patient characteristics between participants and nonparticipants were assessed by a chi-square test, with the exception of differences in mean age, which were assessed by a Student's *t* test. Comparison of the diagnostic subgroups was made by means of a chi-square test. A *P* value of 0.05 was used as a criterion for statistical significance. All analyses were made on SPSS 4.0.1.

■ Results

Patient Sample

The study population consisted of a sample of 650 patients with chronic LBP. Four hundred and three patients (62%) completed and returned the mailed questionnaire and thereby participated in this study. Of these 403 patients, 35 did not meet inclusion criteria and were excluded from the analyses; 12 were excluded because they were over 60 years of age, and 23 were excluded because they had not had a current episode of chronic LBP for more than 3 months. In this report, the 368 responders who met the inclusion criteria are referred to as participants. The dataset of these participants is complete. Of the 247 nonparticipants, anonymous information regarding diagnostic and therapeutic interventions could be revealed only by their GPs; because of a lack of time, however, the GPs only completed questionnaires for 156 nonparticipants. Therefore, the total population of this study consisted of 524 patients with chronic LBP, 368 participants (data from patients and GPs) and 156 nonparticipants (data from GPs only).

Table 1. Demographic Characteristics and Diagnoses of Participants and Nonparticipants

	Participants (n = 368)		Nonparticipants (n = 156)	
	Mean	SD	Mean	SD
Age	41.1	10.0	40.3	10.1
RDQ	9.5	5.8		
NHP				
Energy (10.1)*	30.8	35.3		
Pain (5.8)*	41.2	31.7		
Emotional reactions (10.1)*	12.2	18.7		
Sleep (11.9)*	14.9	24.1		
Physical mobility (3.2)*	24.7	18.4		
Social isolation (5.0)*	7.4	18.4		
	n	%	n	%
Sex†				
Male	189	51	110	71
Female	179	49	46	29
Insurance				
Public	274	75	109	70
Private	91	25	47	30
Civil status				
Married/cohabitation	312	85	128	82
Unmarried/single	55	15	28	18
Diagnosis				
LBP	181	61	95	63
LBP, radiation	98	33	44	29
Other	17	6	13	9

* Mean norm scores; males, 40–45 years of age.[14]
† $P < 0.01$.
RDQ = Roland Disability Questionnaire. NHP = Nottingham Health Profile. LBP = low back pain.

Patient Characteristics

Demographic characteristics are shown in Table 1. Participants and nonparticipants did not differ significantly in age, insurance, civil status, or diagnosis; however, the male to female ratio among participants and nonparticipants differed significantly, indicating that women were more likely to participate. Classification according to profession, which was available only for the participants, showed that 14% were classified as unskilled laborers, 46% as skilled laborers or lower class personnel, 13% as middle class personnel, 6% as higher class personnel, and 12% as housewives; 9% reported that they were students, unemployed, or (early) retired. Twenty-two percent of participants had been classified at some time as medically unfit for their job as a result of LBP and, consequently, were receiving a (partial) disability pension. In the Netherlands, being classified as medically unfit is a temporary designation, which may be discontinued after a medical reexamination; this does not occur often, however, and usually the classification of medically unfit for a job turns out to be permanent. Of the 232

Table 2. Diagnostic Modalities of Chronic Low Back Pain in General Practice During the Previous 12 Months as Reported by the General Practitioners

	Total Population (n = 524)	
	n	%*
History-taking	387	79
Physical examination	342	69
Laboratory examination	19	4
Roentgenogram	115	23
Other imaging techniques	28	5
CT	18	3
MRI	5	1
Myelography	5	1
Other	12	2

* The total is more than 100% because several modalities could be applied to one participant.

participants who had been employed during the previous 12 months, 55% stated that they had been absent from work because of their first or a recurrent episode of chronic LBP. Among the participants reporting absenteeism from work, the median number of weeks was six, with a range from 1 week to 52 weeks. About 25% of participants reporting absenteeism had been absent from work for less than 2 weeks, and about 17% had been absent for more than 26 weeks, of whom seven had been absent for the past 12 months.

Nature of Reported Symptoms

Information on the nature of reported symptoms was available only for the participants. Fifty-nine percent of the participants reported having experienced their first episode of LBP. The remaining 41% reported a median of 3 previous episodes of chronic LBP (range, 1–95 episodes; 90th percentile was 10 episodes). The median duration of the present episode was 53.5 months, with a range of 4 months to 492 months. About one-third of the participants (34%) reported having localized symptoms, and two-thirds (66%) reported having LBP with radiation. According to 31% of the participants, the cause of their symptoms was unknown; however, 21% ascribed their low back pain to working conditions, 12% to lifting or stooping, 6% to a fall, 5% to postural failure, 3% to a sport or traffic accident, and 22% to some other cause. The mean severity of the current reported symptoms was 5.6 ± 2.9 on a 10-point scale. The mean score on the RDQ was 9.4 ± 5.8.

Diagnosis, Therapy, and Referrals

The frequencies of the use of the various diagnostic modalities, as reported by the GPs, are presented in Table 2. Twenty-three percent of the patients with chronic LBP had had a radiograph taken during the previous 12 months, and 5% had been examined by means of other imaging techniques. Table 3 shows that 29% of the study population had not received any therapy at all for LBP during the previous 12 months. Almost half of the population (46%) had received medication, mostly NSAIDs (36%). For 18% of the study population, the GP had advised (bed)rest. Table 4 reveals some major discrepancies between self-reported visits of patients to paramedical therapists and medical specialists and the referrals reported by the GPs. Nineteen percent of the participants reported that they had not visited a paramedical therapist or medical specialist during the previous 12 months, whereas GPs reported not having referred 38% of the participants. Many more participants reported visits to paramedical therapists than had been referred by the GPs.

Analysis of the three subgroups of diagnosis did not reveal any differences in treatment. Significantly more radiographs and other radiodiagnostics had been used for patients with chronic LBP with radiating symptoms and for the category with other diagnoses compared with those used for patients with chronic LBP ($P < 0.05$). Patients with chronic LBP also had been referred to a neurologist/neurologic surgeon or an orthopedist/orthopedic surgeon less often than patients in the other two groups ($P < 0.01$).

■ Discussion

In this study on the management of chronic LBP in primary care, data were derived from the Registration Network of Family Practices using computerized medical records for the selection of patients. The GPs participating in the network are not entirely representative of all other Dutch GPs, but the patient population in this study is very similar to the Dutch general population regarding various demographic characteristics. The representativeness of the GPs has never been an issue, since only GPs who were interested in research and were prepared to use a computer for that purpose were likely to participate.

Table 3. Therapeutic Modalities of Chronic Low Back Pain in General Practice During the Previous 12 Months as Reported by the General Practitioners

	Total Population (n = 524)	
	n	%*
No therapy	143	29
Heat application	65	13
(Bed)rest	88	18
Medication	228	46
Paracetamol/aspirin	37	7
NSAIDs	181	36
Benzodiazepine	39	8
Tranquilizer	2	0
Ointment	21	4
Injection	15	3
Postural advice	91	18
Work advice	23	5
Other	31	6

* The total is more than 100% because several modalities could be applied to one participant.
NSAIDs = nonstimulatory anti-inflammatory drugs.

Table 4. Visits to Paramedical Therapists and Medical Specialists for Chronic Low Back Pain During the Previous 12 Months as Reported by the Participants and the General Practitioners

	Participants* (n = 368)		General Practitioners			
			Total Population (n = 524)		Participants† (n = 368)	
	n	%‡	n	%‡	n	%‡
No referral/visit	71	19	200	40	132	38
Physiotherapy	220	61	181	36	129	37
Manual therapy	69	19	17	3	11	3
Chiropractic	28	8	10	2	7	2
Mensendieck therapy§	25	7	8	2	6	2
Cesar therapy§	33	9	27	5	19	6
Back school	—	—	3	0	2	0
Orthopedics (surgery)	33	9	38	8	27	8
Neurology (surgery)	77	21	76	15	59	17
Rheumatology	5	1	6	1	6	2
Anesthesiology	13	4	8	2	7	2
Rehabilitation specialist	2	1	7	1	7	2
Gynecologist	1	0	—	—	—	—
Radiologist	—	—	1	0	1	0
Psychologist	1	0	1	0	—	—
Other	45	12	5	1	4	1

* Number of participants (%) who visited paramedical therapists and medical specialists, reported by the participants themselves.
† Number of participants (%) referred to paramedical therapists and medical specialists, reported by the general practitioners.
‡ The total is more than 100% because patients could have been referred to or could have visited more than one therapist or specialist during the previous 12 months.
§ Posture correction and exercise therapy.

The network focuses specifically on chronic health problems. To minimize the intra- and interphysician variance, the quality of the data is guaranteed and constantly improved by instruction and training sessions for the GPs, the use of a standard registration handbook, regional consensus groups, and the design of a special software program for data control and quality control experiments. The data on health problems and diagnoses are reliable; less than 1% incorrect entries were discovered with a special software program for data control, and the quality control experiments, including hypothetical patients to check the interdoctor variance in coding, were satisfactory.[19] The major advantages of the computerized database used in this study are the high quality of the data and the uniformity of registration. A disadvantage may be that the quality of registration depends on the accuracy of the GPs and that, consequently, the least severe chronic cases may fail to be recorded.

The retrospective design does not allow inferences to be made about cause and effect. The aim of this study was to provide an overview of the management of chronic LBP in general practice. The distribution of a number of relevant patient characteristics among the participants and nonparticipants was more or less even, except for the male to female ratio (women were more likely to participate). Pope[24] stated that in population-based studies in general, poor response is associated with advancing age, male gender, lower social class, lower educational level, and poor health status. Because the total study population, participants as well as nonparticipants, was used in describing the management of chronic LBP, this did not have any effect on the estimates of the frequencies of the use of diagnostic modalities, therapeutic interventions, and referrals in this study.

The long median duration of chronic LBP found in this study population may indicate that either patients with chronic LBP are continuously in pain, even for many years, or that when reporting on the duration of the symptoms respondents ignored intervals when the pain was absent or much better. Carey et al[3] reported a mean of 14 years of persistent or remittent LBP in a population with chronic LBP. This supports the present study's finding of a long duration of symptoms and may indicate that once LBP has persisted for more than 3 months, recovery is unlikely. Prevention of chronic LBP should therefore be one of the major aims in the management of LBP in primary care. The present study and that of Carey et al[3] used prevalent cases of chronic LBP, and both studies relied on retrospective data, which may have introduced a recall bias. Only future prospective studies with incident cases will be able to provide valid data on the number of episodes and duration of chronic LBP.

About 20% of the patients with chronic LBP in this study had not visited the GP in the previous 12 months and, consequently, data on history and/or physical examination were not available during this time interval. Almost a quarter of the study population of patients with chronic LBP had undergone a radiographic examination. This presumably will present an underestimation of the total percentage of radiographs made of patients with chronic LBP because our questionnaire only referred to

the preceding 12 months. Most patients who have had chronic LBP for many years will have probably been subject to radiodiagnostic evaluation at an earlier stage. Carey et al[3] found that 70% of the patients with chronic LBP in their study had had a radiograph in the previous 12 months. Although the authors suggested that recall bias probably resulted in an overestimation of radiographic examinations in this study, this does not account for the extremely high use of radiographs. It seems likely that the difference between the high rates of radiographic examination in the United States and the lower rates in the Netherlands reflects a difference in medical culture of the treating physicians. In spite of the current conviction that a radiographic examination for patients with nonspecific LBP has little diagnostic value or is at least controversial, radiographs are still frequently used diagnostic aids in primary care. This finding is much in line with results from other studies.[9,13,17,22] Comparison of the diagnostic subgroups revealed that significantly more radiodiagnostic examinations had been used for patients with chronic LBP with radiation and patients with a more differentiated diagnosis (category other diagnoses) than for patients with chronic LBP symptoms with no radiation. Whether the more differentiated diagnoses are the cause or the effect of the higher proportion of radiodiagnostic examinations, however, remains unknown.

For one in five or six patients the GP had advised (bed)rest, despite the current tendency in the management of LBP toward early reactivation and avoidance of inactivity.[21,32]

The authors of the present have found some discrepancies between the self-reported visits of patients to paramedical therapists and the referrals reported by the GPs. The number of self-reported visits to paramedical therapists was higher than the number of referrals reported by the GPs. In the Netherlands, physiotherapy is by far the most commonly applied form of paramedical therapy, and its costs are covered by the Dutch Public Health Insurance and by private health insurance. Manual therapists in the Netherlands are physiotherapists with additional training and specific qualifications in manipulative techniques. A GP therefore may register a referral as physiotherapy and be unaware of the fact that the patient is treated by a manual therapist. Chiropractors and osteopaths play only a minor role in the Netherlands healthcare system. The discrepancy between the referrals from the GP and the reports from the participants seems to indicate that patients often refer themselves; however, because paramedical therapy in the Netherlands only is covered by insurance if a patient is referred by a GP (or medical specialist), the authors argue that self-referrals to regular paramedical therapy are not very common in the Netherlands. The discrepancy between GPs referrals and patients' use of paramedical therapy is more likely to be caused by overreporting by the patients resulting from recall bias and underreporting by the GPs resulting from incomplete registration. GPs are not eager to refer patients to complementary therapies because of their controversial effectiveness so self-referral may apply, for example, more to acupuncturists, homeopathists, magnetic therapists, or anthroposophic therapists.

The authors compared the results of this study with the evidence-based guidelines suggested by the QTF on Spinal Disorders[28] and by the United Kingdom Clinical Standards Advisory Group (CSAG) Committee on Back Pain.[6] The CSAG suggested that as LBP becomes chronic, psychosocial factors become more important, and, therefore, purely physical treatment for patients with chronic LBP should be avoided. Further, members of CSAG stated that there is strong evidence for an active exercise and multidisciplinary rehabilitation approach based on a biopsychosocial model. Therapeutic options for symptomatic relief are considered to be valuable by the CSAG only if they facilitate active exercise and rehabilitation. If there is no improvement within 6 weeks, additional therapeutic options, such as drugs, injections, and physical modalities, should be considered. Our observations are not in line with these guidelines. The NHP scales referring to the physical components (energy, pain, and physical mobility) had higher scores in the present study population than in a healthy reference population, and scores from the present study were comparable to those of other chronically ill patients.[12,14] The NHP scores reflecting the psychosocial aspects (emotional reactions, sleep, and social isolation) were not much higher than those of a healthy reference population. Psychosocial and multidisciplinary treatment modalities were not applied frequently in this study. The authors conclude, therefore, that psychosocial factors and interventions did not play a major role in this study population of patients with prevalent chronic LBP treated in general practice. Psychosocial distress may be more frequent in a population of patients with chronic LBP treated in pain clinics or secondary care.

Of the therapeutic modalities most frequently applied by the GPs in this study and recommended by the QTF, heat application and bedrest lack scientific support regarding their effectiveness, and the use of NSAIDs are controversial; the usefulness of postural/work advice, however, has been proved.[28] The authors of the present study did not investigate any treatments that the physiotherapists applied to the patients.

The authors conclude that various therapeutic interventions of uncertain effectiveness have been applied to patients with chronic LBP, indicating that no consistent therapeutic management of chronic LBP prevails in general practice. In the Netherlands, clinical guidelines for LBP have been developed recently by the Dutch College of General Practitioners in Utercht, The Netherlands, and were published in the beginning of 1996 (Huisarts Wet 1996;39:18–31). The implementation of these guidelines needs further study.

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References

1. Andersson GBJ. The epidemiology of spinal disorders. In: Frymoyer JW, ed. The Adult Spine: Principles and Practice. New York: Raven Press, Ltd., 1991:107–46.
2. Biering-Sϕrensen F. A prospective study of low back pain in a general population. III: Medical service—work consequence. Scand J Rehabil Med 1983;15:89–96.
3. Carey TS, Evans A, Hadler N, Kalsbeek W, McLaughlin C, Fryer F. Care-seeking among individuals with chronic low back pain. Spine 1995;20:312–17.
4. Cherkin DC, Deyo RA, Wheeler K, Ciol MA. Physician variation in diagnostic testing for low back pain: Who you see is what you get. Arthritis Rheum 1994;37:15–22.
5. Cherkin DC, Deyo RA, Wheeler K, Ciol MA. Physician views about treating low back pain: The results of a national survey. Spine 1995;20:1–10.
6. Clinical Standards Advisory Group. Report of a CSAG committee on back pain. Rosen M, chairman. London: HMSO, 1994.
7. Cypress BK. Characteristics of physician visits for back symptoms: a national perspective. Am J Public Health 1983; 73:389–95.
8. Deyo RA. Comparative validity of the Sickness Impact Profile and shorter scales for functional assessment in low back pain. Spine 1986;11:951–54.
9. Deyo RA, Diehl AK. Lumbar spine films in primary care: Current use and effects of selective ordering criteria. J Gen Intern Med 1986;1:20–5.
10. Frymoyer JW. Back pain and sciatica. N Engl J Med 1988; 318:291–300.
11. Frymoyer JW, Cats-Baril WL. An overview of the incidence and costs of low back pain. Orthop Clin North Am 1991;22:263–71.
12. Hunt SM, McEwen J, McKenna SP. Measuring health status: A new tool for clinicians and epidemiologists. J R Coll Gen Pract 1985;35:185–8.
13. Kaplan DM, Knapp M, Romm FJ, Velez R. Low back pain and x-ray films of the lumbar spine: A prospective study in primary care. South Med J 1986;79;811–4.
14. König-Zahn C, Furer JW, Tax B. Measuring health status: I: General health. Assen: Van Gorcum, 1993:100–14. (in Dutch).
15. Lamberts H, Wood M. The International Classification of Primary Care. Oxford: Oxford University Press, 1983:1–49.
16. Lamberts H. The General Practitioner in Practice: Report of the Transition Project. Meditekst: Lelystad, 1991:150–72. (in Dutch)
17. Liang M, Komaroff AL. Roentgenograms in primary care patients with acute low back pain: A cost-effectiveness analysis. Arch Intern Med 1982;142:1108–12.
18. Metsemakers JFM, Höppener P, Knottnerus JA, Kocken RJJ, Limonard CBG. Computerized health information in the Netherlands: A registration network of family practices. Br J Gen Pract 1992;42:102–6.
19. Metsemakers JFM. Unlocking patients' records in general practice for research, medical education and quality assurance: The Registration Network Family Practices. Amsterdam: Thesis Publishers, 1994. (PhD thesis).
20. Miedema HS. Study of rheumatic diseases in several echelons: A basic report. Leiden: Nederlands Instituut voor Praeventieve Gezondheidszorg TNO, 1994:1–229. (In Dutch).
21. Nachemson AL. Advances in low back pain. Clin Orthop 1985;200:266–78.
22. Owen JP, Rutt G, Keir MJ, et al. Survey of general practitioners' opinions on the role of radiology in patients with low back pain. Br J Gen Pract 1990;40:98–101.
23. Peters D, Davies P, Pietroni P. Musculoskeletal clinic in general practice: Study of one year's referrals. Br J Gen Pract 1994;44:25–9.
24. Pope D. A survey of shoulder pain in the community: Issues of response, case definition and prevalence. Manchester: University of Manchester, 1995. (MSc thesis).
25. Roland M, Morris R. A study of the natural history of back pain. Part I: Development of a reliable and sensitive measure of disability in low back pain. Spine 1983;8:141–4.
26. Roland M, Morris R. A study of the natural history of back pain. Part II: Development of guidelines for trials of treatment in primary care. Spine 1983;8:145–50.
27. Schroth WS, Schectman JM, Elinsky EG, Panagides JC. Utilization of medical services for the treatment of acute low back pain: Conformance with clinical guidelines. J Gen Int Med 1992;7:486–91.
28. Spitzer WO, Leblanc FE, Dupuis M, et al. Scientific approach to the assessment and management of activity-related spinal disorders: A monograph for clinicians. Report of the Quebec Task Force on Spinal Disorders. Spine 1987;12(suppl): 1–59.
29. Svensson H, Andersson GBJ. Low back pain in forty to forty-seven year old men. I: Frequency of occurrence and impact on medical services. Scand J Rehabil Med 1982;14:47–53.
30. Tulder MW van, Koes BW, Bouter LM. A cost-of-illness study of back pain in the Netherlands. Pain 1995;62:232–40.
31. Valkenburg HA, Haanen HCM. The epidemiology of low back pain. In: White AA, Gordon SL, eds. Symposium on Idiopathic Low Back Pain. St. Louis: C.V. Mosby Company, 1982:9–22.
32. Waddell G. A new clinical model for the treatment of low back pain. Spine 1987;12:632–44.

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